

Amendment Under 37 C.F.R. § 1.116  
Appl. No. 09/787,631

### REMARKS/ARGUMENT

This amendment is in response to the Office Action of May 16, 2002, in accordance with 37 C.F.R. § 1.116.

Claims 7 and 11 through 22 are pending in the application. Claims 7 and 11 through 14 are amended, and new claim 22 is added by this response. Entry of these amendments is requested. The applicants believe that the amendments place the application in condition for allowance or in better condition for appeal.

The applicants filed a request for a three-month extension of time and a notice of appeal on November 18, 2002. The Official Fees were paid by deposit account. No fee is due for this response.

#### 1. Rejection Under 37 C.F.R. § 112, First Paragraph

The Examiner rejects claims 1 through 7 and 11 through 21 are rejected under 35 U.S.C. 112, first paragraph, stating that the specification does not reasonably provide enablement for the imidazolin-5-one and amino acid composition recited in claim 1. Specifically, the Examiner states that there is no adequate direction provided by the applicants as to how to select the active compounds that can be successfully used in the synergistic composition and method invention.

Claim 1 is canceled and is replaced by new claim 22, which is specific to two preferred active compounds, (4-S)-4-methyl-2-methylthio-4-phenyl-1-phenylamino-2-imidazolin-5-one and N<sup>1</sup>-[(R)-1-(6-fluoro-2-benzothiazolyl)ethyl]-N<sup>2</sup>-isopropoxycarbonyl-L-valinamide. Each of Examples 1 through 4 of the application employs these two compounds and each shows that they provide synergistic fungicidal effects when used in combination. All of the other claims remaining in the application are now dependent on claim 22. This rejection is believed to be overcome and withdrawal of the rejection is requested.

#### 2. Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, the Examiner states that the expression "curatively or preventively controlling" in claim 14 renders the claim indefinite because the words "cure" and "prevention" are absolutes

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denoting a complete absence of disease processes now and in the future whereas "controlling" implies merely maintaining or reducing fungal numbers or reproduction.

The applicants do not agree with the Examiner's interpretation of the meaning of the terminology. However, the applicants amend claim 14, *inter alia*, by deletion of the phrases "curatively" and "preventively". This rejection is believed to be overcome and withdrawal of the rejection is requested.

**3. Rejection Under 35 U.S.C. § 103(a)**

The Examiner rejects claims 1 through 7 and 11 through 21 under 35 U.S.C. 103(a) as being unpatentable over Latorse (WO96/03044), Shibara et al. (EP 0 775 696 A1), and Seitz et al. (EP 0 472 996 A1) in view of Budavari (Merck Index, 11<sup>th</sup> ed., 1989, monograph 4964, page 803). The applicants note that the U.S. equivalents of WO 96/03044, EP 0 775 696 A1, and EP 0 472 996 A1 are U.S. Patent Numbers 5,906,986, 5,789,428, and 5,453,531, respectively. The applicants traverse this rejection and request reconsideration.

**A. The Claimed Invention**

The application on page 1 at lines 15 through 21 states that International patent publication WO 96/03044 also discloses a number of fungicidal compositions comprising a 2-imidazolin-5-one in combination with one or more fungicidally active materials. The application also discloses that patent applications EP 0 775 696 and EP 0 472 966 present compounds for fungicidal use which have an amino acid amide structure. Also, on page 5, at lines 14-23, it is stated:

Compound (I) is known, in particular, from patent application EP-A-0,629,616.

Compound (II), when A represents the group A1, and its use as a fungicide are described in particular in European patent application EP-A-0,775,696.

Compound (II), when A represents the group A2, and its use as a fungicide are described in particular in European patent application EP-A-0,472,996.

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The applicants' amendment removes compound (II), when A represents the group A2. Therefore, the applicants maintain that the rejection, insofar as it is dependent upon European patent application EP 0 472 996 to Seitz et al., is moot.

**B. The Cited Art**

The Latorse publication discloses a fungicidal compound that corresponds to Compound (I) of the applicants' invention and further discloses its use in combination with a second fungicidal compound. The derivative compound can be

- a derivative of dithiocarbamic acid or its salts,
- a derivative of phosphorous acid, a chlorinated derivative of benzene,
- a derivative comprising a heterocycle containing from 1 to 2 nitrogen atoms,
- a derivative of a triazole, a dicarboximide derivative, copper or an organic or inorganic derivative thereof,
- an amide, a morpholine derivative,
- a derivative of the methoxyacrylate type,
- a guanidine derivative, or
- a derivative of the phenylbenzamide type.

Nowhere among these derivatives is there a disclosure or suggestion of the claimed  $N^1$ -[(R)-1-(6-fluoro-2-benzothiazolyl)ethyl]- $N^2$ -isopropoxycarbonyl-L-valinamide. The closest disclosure in the Latorse publication to the applicants' claimed compound is the disclosure of amides, but the only operable amides disclosed are cymoxanil, metalaxyl, and oxadixyl.

Similarly, the Shibata et al. application discloses  $N^1$ -[(R)-1-(6-fluoro-2-benzothiazolyl)ethyl]- $N^2$ -isopropoxycarbonyl-L-valinamide, but only states that it can be used in combination "with other fungicides" without any identification of such fungicides.

The Seitz et al. application is not discussed because it is believed to be moot as explained above.

The Budavari monograph merely discloses that iprodione, which can, if desired, be used in combination with Compound (I) and Compound (II), is a known fungicide.

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**C. The Rejection**

The applicants understood the Examiner's rejection to be that Compound (I) is a known fungicide and Compound (II) is a known fungicide and, thus, it would be obvious to use the two compounds in combination. However, the Examiner has acknowledged, "[s]ynergism is an unexpected and highly unpredictable effect."

The Applicants maintain that their claimed invention is a combination, i.e., (4-S)-4-methyl-2-methylthio-4-phenyl-1-phenylamino-2-imidazolin-5-one and N<sup>1</sup>-[(R)-1-(6-fluoro-2-benzothiazolyl)ethyl]-N<sup>2</sup>-isopropoxycarbonyl-L-valinamide, that clearly exhibits synergism. The applicants demonstrated this synergism for this combination in each of Examples 1 through 4 of the application. The applicants' demonstration of synergism uses a means for determining synergism that is accepted in the art. This means is the Colby formula, which was published in the journal Weeds, 1967, 15, pp. 20-22.

The applicants' examples show synergism for the claimed combination of compounds and "synergism is an unexpected and highly unpredictable effect." Accordingly, unexpected results have been shown for the claimed combination and it logically follows from this showing that the combination cannot be obvious. It is therefore requested that the rejection of claims 1 through 7 and 11 through 21 under 35 U.S.C. 103(a) be withdrawn.

In the Office Action, the Examiner has stated:

The declaration under 37 CFR 1.132 filed May 2, 2002 is insufficient to overcome the rejection of claims 1-18 based upon 35 USC 103 as set forth in the last Office action because: the report of Latorse and Givois is not submitted in a proper declaration form. There is no assurance in the report as to the truth of the facts presented. It is improper to file a declaration with the data in separate submissions, as it was done in the instant case. Therefore, the report is not seen as probative evidence setting forth unexpected benefits to support patentability in the declaration under 37 CFR 1.132.

The applicants believe that it is evident from the amendments and arguments above that it is not necessary to rely on the declaration under 37 CFR 1.132 filed May 2, 2002, to support their claim of patentability. The applicants advise the Examiner that the designations used in the document previously submitted by declaration correspond to the following compounds.

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<u>Designation</u>	<u>Compound</u>
RPA407213 (Fenamidone)	(4-S)-4-methyl-2-methylthio-4-phenyl-1-phenylamino-2-imidazolin-5-one
Fencaramide (Iprovalicarb) propyl]carbamate	isopropyl [2-methyl-1-(1-phenylethylcarbamoyl)-
Fosetyl A1	phosphorous acid derivative

The compound names for Fenamidone and Iprovalicarb are the Chemical Abstract names.

The application is believed to be in condition for allowance. Favorable consideration is requested.

Respectfully submitted,



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**APPENDIX A**  
**"CLEAN" VERSION OF EACH PARAGRAPH/SECTION/CLAIM**  
**37 C.F.R. § 1.121(b)(ii) AND (c)(i)**

**IN THE CLAIMS:**

**Please enter the following amendments to claims 7 and 11 through 14:**

7. (Thrice Amended) The fungicidal composition of claim 22 further comprising another fungicidal active material.

11. (Twice Amended) The fungicidal composition of claim 22 further comprising an agriculturally suitable inert support and optionally an agriculturally suitable surfactant.

12. (Twice Amended) The fungicidal composition of claim 22 comprising from 0.5 to 99% of the combination of compound (I) and compound (II).

13. (Amended) A process for controlling the phytopathogenic fungi of crops in an area, which consists in applying a compound (I) and a compound (II) as defined in claim 22 to said area.

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14. (Thrice Amended) A process for controlling the phytopathogenic fungi of crops of the phytophthora and plasmopara genera comprising applying an effective and non-phytotoxic amount of the fungicidal composition of claim 22 onto the crops to be treated.

**Please enter the following new claim 22:**

22. (New) A fungicidal composition comprising a synergistic fungicidally effective amount of:

A) compound (I), (4-S)-4-methyl-2-methylthio-4-phenyl-1-phenylamino-2-imidazolin-5-one,  
and

B) compound (II), N<sup>1</sup>-[(R)-1-(6-fluoro-2-benzothiazolyl)ethyl]-N<sup>2</sup>-isopropoxycarbonyl-L-valinamide,

wherein the ratio of the weight of compound (I) to the weight of compound (II) is in the range of from 5 to 0.5.

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**APPENDIX B**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**  
**37 C.F.R. § 1.121(b)(iii) AND (c)(ii)**

**IN THE CLAIMS:**

**Please enter the following amendments to claims 7 and 11 through 14:**

7. (Thrice Amended) The fungicidal composition [as claimed in claim 1, characterized in that it comprises, in addition,] of claim 22 further comprising another fungicidal active material.
11. (Twice Amended) The fungicidal composition [as claimed in claim 1, characterized in that it comprises, besides compounds (I) and (II),] of claim 22 further comprising an agriculturally suitable inert support and optionally an agriculturally suitable surfactant.
12. (Twice Amended) The fungicidal composition [as claimed in claim 1, characterized in that it comprises] of claim 22 comprising from 0.5 to 99% of the combination of compound (I) and compound (II).
13. (Amended) A process for controlling the phytopathogenic fungi of crops in an area, which consists in applying a compound (I) and a compound (II) as defined in claim [1] 22 to said area.



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14. (Thrice Amended) A process for [curatively or preventively] controlling the phytopathogenic fungi of crops of the phytophthora and plasmopara genera[, characterized in that] comprising applying an effective and non-phytotoxic amount of [a] the fungicidal composition [as claimed in claim 1] of claim 22 [is applied] onto the [vegetation] crops to be treated.

**Please enter the following new claim 22:**

22. (New) A fungicidal composition comprising a synergistic fungicidally effective amount of:

A) compound (I), (4-S)-4-methyl-2-methylthio-4-phenyl-1-phenylamino-2-imidazolin-5-one,  
and

B) compound (II), N<sup>1</sup>-[(R)-1-(6-fluoro-2-benzothiazolyl)ethyl]-N<sup>2</sup>-isopropoxycarbonyl-L-valinamide,

wherein the ratio of the weight of compound (I) to the weight of compound (II) is in the range of from 5 to 0.5.